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THE MACDONALD LASSIE

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runs through the town of Ste.
Scholastique. See page 3.

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Journal Jottings

Some day that Great Canadian
Novel that all our literary critics
claim they are still waiting to read
may find its way on to our book
shelves via either one of Quebec's
most recent major developments
— the Ste. Scholastique airport or
the James Bay project.

For every acre consumed, every
river diverted, every person
transplanted in these projects,
thousands of words have already
been written. There have been
newspaper and magazine articles,
briefs, reports, studies. For the
most part, all are, to date,
non-fiction and most make for
fascinating reading. It is for that
reason that we are delighted to

publish in this month's Journal two
articles on Ste. Scholastique.
The first by Prof. Bider is an
overall view of the total site;
a gentle look at the land and its
people; a hard look at the project
itself. The second by Prof. Jones
zeros in on one aspect — the
area's forest regions and the plans
underway for their maintenance
and development.

Reading these two articles on
Ste. Scholastique, thinking about
the James Bay project and
wondering what area in our vast

and beautiful province might be
slated for major development next,
I question whether it might be
time for Quebec to take a long,
hard look at the entire province
and consider some form of
land-use legislation.

I am not necessarily knocking
progress but I would be loath
to think that that Great Canadian
Novel might just start out as does
that of one of my favourite
cartoon character's: "'It was a
dark and stormy night' and once
more we, in Quebec, locked the
barn door after the horse
was stolen."

Hazel M. Clarke

Expropriation! That single word can bring out more feelings of fear, anger, misunderstanding, anxiety, and resentment than almost any other government action short of declaring war. This can actually be expected because of the high premium we place on the ownership of land and property.

Throughout Canada's history, land, agriculture, and natural resources have played a critical role in the nation's development. Where land was fertile and natural resources abundant, farms and communities sprung up which have since grown into our more prosperous cities and agricultural areas. Where land was not fertile or suitable for farming, areas either did not develop or soon grew economically stagnant after the original resource base had been so exploited that the damage inflicted became irreversible.

With this historical background it is no wonder that many people, particularly farmers who derive their livelihood from the land, view expropriation with alarm. They see expropriation as removing from private ownership the major income producing resources of many regions.

But expropriation nevertheless remains one of those necessary inconveniences we must somehow learn to live with. Often many resource development efforts that are in the public interest are of such a large scale or so expensive or so risky that private business

or industry are unable or unwilling to undertake these efforts. In these instances the development must be undertaken by government if anything is to be done. And in many cases this necessitates the expropriation of land in order to gain control of the resources necessary to carry out the project.

While many do not argue about the necessity of government expropriation in these instances, they do object to the type of compensation given to the owners for their land. Often the compensating procedures are so rigid that all lands are valued according to a "yardstick" formula which leads to inequities for certain landowners. How, for example, does one compensate an owner for the costs and inconveniences such as moving, personal inconvenience, interruption of business, or loss of good will? Or how does one compensate a farmer who has had his land divided in half by a new highway? Or how does one compensate a farmer who has made many improvements on his farm as opposed to his neighbour who has left his land erode and his buildings unrepaired? In many cases expropriation procedures do not take into account such nonmonetary considerations. This is the one area where there is much room for improvement.

Actually, expropriation should be viewed as a last resort measure

where particular public policy objectives cannot be met by other land use controls available to government such as zoning, easements, and subdivision regulations which do not remove the ownership of land from private hands. But because they do leave a large number of property rights in control of the landowner, they simply are not effective as land use controls. Often landowners will try to capture the large increases on land values that often result from breaking the rules of these measures. Others feel that private ownership is such a sovereign right that they are not willing to give up any of their property rights and consequently fight any attempts to impose some of these less stringent controls. As a result government is often forced to use more drastic measures such as expropriation to achieve its public policy goals. Unless private landowners become more willing to work together and cooperate with one another for the benefit of all society, they are likely to be faced with even more measures such as expropriation in the future. Unless landowners cooperate together to improve the land use situation in Canada, government is likely to step in and do the job for them. We have to learn to give up some of our property rights for the betterment of society or we will risk losing even more of them in the future.

Gordon Bachman

Reflections on the Grand Design

On March 27, 1969 the Federal Government announced that Ste. Scholastique had been chosen as the site of a new international airport and expropriation plans were filed for 95,000 acres north-west of Montreal. Within months of the announcement soil test holes were being dug and firm commitments regarding the location of quarry sites, runways and access roads were being made. By the summer of 1970 the clearing of land for the runways, aprons and taxiways was completed, one main service road was under construction and railway engineers were in the process of choosing a new right-of-way through the airport which would conform to the expected industrial development of the area.

In the course of these events, Dr. W. Schneider, Chairman of the National Research Council (N.R.C.), and Mr. B. Baribeau, Chairman of the Bureau d'Aménagement du Nouvel Aéroport International de Montréal (B.A.N.A.I.M.), the airport project administrators, instigated plans for an ecological study of the airport area. In the summer of 1970 negotiations between N.R.C., B.A.N.A.I.M. and the Université de Montréal were completed and a project called Ecologie de la Zone de l'Aéroport International de Montréal (E.Z.A.I.M.) was organized.

Dr. Pierre Dansereau, then professor of ecology at the Institut d'Urbanisme, Faculté de l'Aménagement, Université de Montréal, was named director of the project and he began to flesh out a program with a team of scientists. In essence the members of this group were to perform a piece of

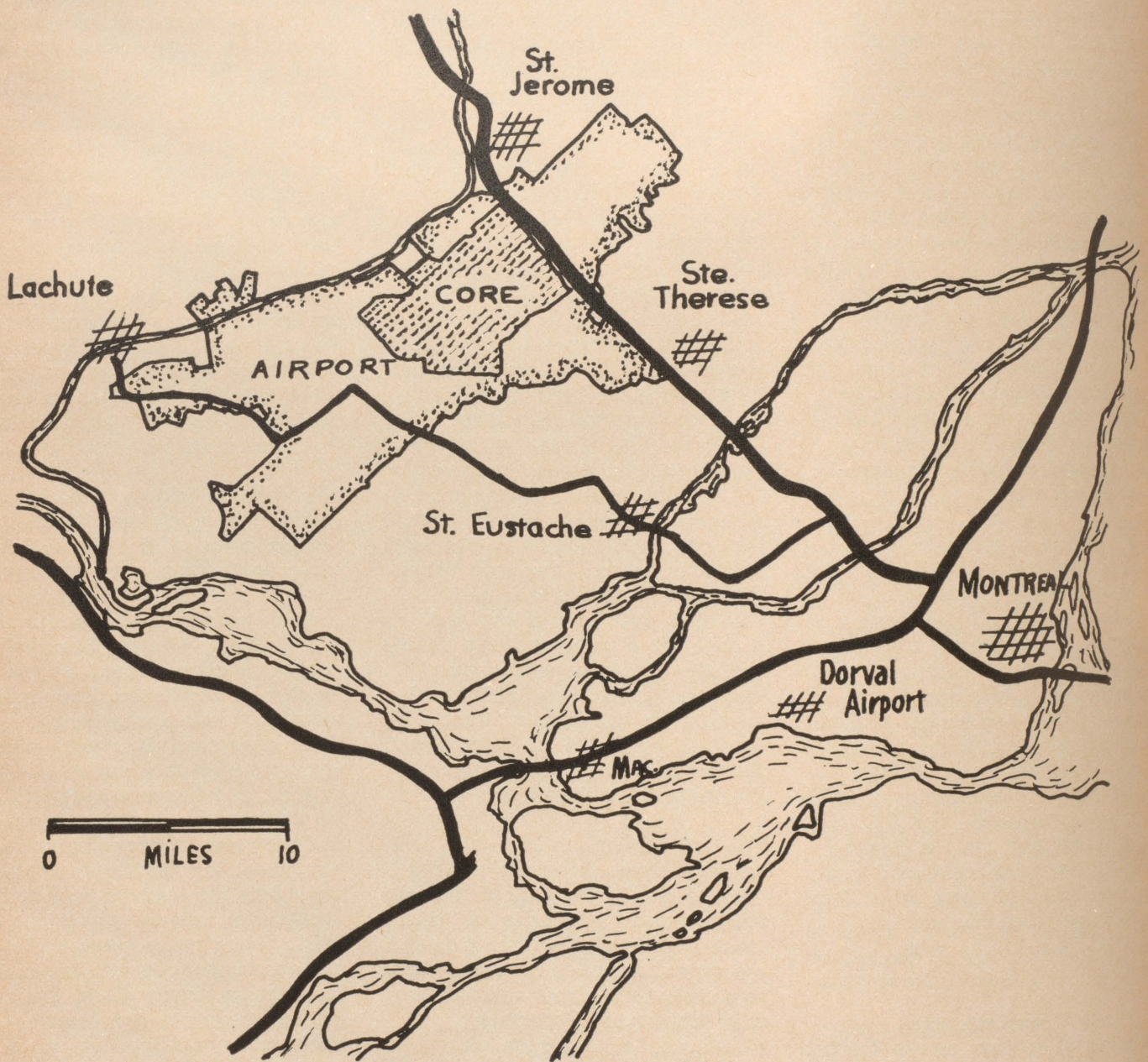
research rather than to act as consultants. The orientation became one of trying to understand man in his capacity to manage the agricultural, industrial, urban and recreational landscape.

The team gathered together to fulfil this aim represented several disciplines and was drawn from five universities including Macdonald College of McGill University. Researchers included a geomorphologist, plant and animal ecologists, a geographer, a chemical engineer with special interests in pollution problems, and, finally, a social psychiatrist with an interest in human ecology. This selection of researchers had been based on a need to cover a minimum number of facets of the total ecology of the airport area. However, the funds to do the work had been agreed upon long before the needs of the individual researchers could be determined. It might be of some interest to note that the cost of financing the two-year project would eventually be equal to the first contract tendered by B.A.N.A.I.M. to clear the forest for two runways, the taxiways and aprons.

The irreconcilable broad gap between what the scientists felt they needed in the way of financial support to do a "proper job" and what was available from Government sources led the researchers to narrow their sights and redefine their objectives. Fortunately objectives had not been clearly defined by the client and although everyone recognized that the inventory of the resources was of primary importance, decisions had to be made as to what depth each study would go.

Some resource inventories such as the Canada Land Inventory soil and forest maps and several sets of air-photos, the oldest dating back to 1927, were available and these served as a point of departure for more detailed studies. Before collecting data the teams decided on standard formats which would eventually allow all results to be integrated. Geomorphologists, plant ecologists and land-use geographers surveyed the complete area and were able to elaborate series of maps, some covering the entire area and others depicting specific or local characteristics, while the other researchers presented the bulk of their information in the form of analytical reports.

The geomorphologists not only provided a description of the mosaic of physical units which make up the area, but also thorough descriptions of the events which had sculptured the landscape since the glaciers retreated. The plant ecologists concentrated on the masses of vegetation, their structures and their dynamic nature. From their carefully drawn maps we were able to visualize both the present and future stands of vegetation. The land-use geographers drew up three basic maps, two based on air photos of 1927 and 1966, the third on a detailed ground-site survey carried out in 1971. These maps showed clearly the accelerated rate of change in land use in recent years. The animal ecologists and human ecologists not being able to do exhaustive inventories of the whole area depended on survey techniques. The tasks of determining the animal resources of the area was done at two levels. One group took a community activity ap-



proach while the other looked specifically at the bird resources, particularly those which could be a hazard to aircraft. The human ecologists through surveys determined how residents viewed their environment and gained some appreciation of the state of the mental health of the communities. The last group, whose principal preoccupation was a concern for possible pollution, also became responsible for the final integration of all the studies. In terms of conservation, for example, data were pooled and plotted to produce a composite picture of the areas or features each team thought should be protected. In terms of animal resources, the highest levels of animal activity would be found or areas which would encompass the most representative sample of all animal species were delimited using soil topography and vegetation parameters.

To date there have been eight reports ranging from about 50 to 300 pages each and about 20 maps which have been presented to the clients. Several more pieces of work are in the process of being completed. Some day these reports might be released for publication, but, for the moment, they are being held by the clients and serve little purpose other than attesting to the fact that work had been completed. In retrospect the greatest challenge is not to provide reports on the ecology of the airport, but rather to use the ecological data provided to design and administer the airport sensibly by providing and maintaining a quality environment while making the best possible use of the natural resources.

The Area

The location of the airport and runways were based on many criteria, most of which dealt with air and land traffic routes now and in the future. The size of the area to be expropriated was determined by estimating the limits at which the fulltime operation of the airport would not cause complaints by neighbouring residents. The precise boundaries were drawn along present lot lines as close to the theoretical complaint limit as possible. This resulted not only in the acquisition of an immense piece of land, but one which could be characterized by its ecological diversity, possibly even a capsule example of the St. Lawrence valley plain.

The general orientation of the airport is from southwest to northeast, along the northern edge of the St. Lawrence valley at the base of the Laurentian Mountains. Except in the most western region where the airport encompasses a small portion of the granitic Laurentians, the northern boundary consists of the North River, which is polluted from the untreated discharges of several Laurentian villages, towns and industries. Along the course of the picturesque meandering river are a few oxbows and some spectacular sand dunes, nine million tons of which are destined to become the base of the airport runways. As we look to the south from the river across the sand we can see grey birch at the far edge of the dunes. Beyond these are stands of spruce, hemlock and pine interspersed with stands of aspen pioneering on abandoned fields and finally the predominantly maple

forests which form the largest part of the skyline.

The crest of the hill is mostly composed of glacial till, but the plateau, which extends to the south, is a mosaic of soils and ecological communities. Almost at the centre of this plateau on which the airport proper will be built is a large bog about two square miles in extent. Around the bog are moraines, like islands of rubble, protruding from the large expanses of heavy clay deposited not so long ago by the Champlain Sea. Scattered about are small patches of muckland, rich in organic matter and often underlain with a layer of pearl white marl sometimes reaching nearly five feet in thickness. In several areas but particularly to the southeast are large beaches of sand of varying thicknesses deposited over the clay base. Because of their low fertility much of the sand and till areas were not cultivated and the forests which have remained have been a source of saw timber, firewood and maple products since colonization. For the most part the rich clay, loam and muck soils are cultivated. Hay, corn and pasture grasses are grown for dairy cattle, the basis of the agricultural industry of the region. Scattered among the dairy farms are the occasional fields of oats and wheat, sod grass farms and in some areas, where irrigation has been installed, there are small fruit and the occasional truck farms.

At the southern limit of the plateau, there are deep eroded gulleys which lead to the floor of what once was the Ottawa-St. Lawrence riverbed, some 20 feet below. The rim of the plateau, or the shore

The photos on these pages are not before and after ... but they could well be. Farms similar to the one below have disappeared; the photo on page 7 shows one of the runways under construction.

of the old river, is definable over a distance of about 20 miles between St. Hermas to the west and Ste. Thérèse at the extreme southeast corner of the airport. The soils in the old riverbed are largely derived from marine clay and, except where there is poor drainage, the land is used for farming much in the same way as it is on the higher plateau. Although there are some maple woods and a few cedar thickets on the lower plain, the trees which are most impressive are the tall elm and ash which grow along fence lines and the round clumps of willow which line some of the streams. It is in this area during the summer that one feels the impact of tragedy of the Dutch elm disease which is now killing the trees which for so many years provided shade to clusters of passive Holstein cattle.



Farms in this part of Quebec are for the most part long and narrow and the houses are usually built a few feet from the roads which tend to run through the centre of the best agricultural land. The odd ornamental maple or butternut tree might be grown near the house, but in general the farm buildings stand stark and unprotected from the elements. Toward the ends of the narrow strips of land are the woodlots of varying size and quality, most of which used to be far more exploited for wood and sugar products than they are now.

The people of the land are warm, friendly, resourceful, but have no time for transients and intruders who simply possess houses without working the land. They communicate extremely little with the cool urbanites. Land and houses are recognized by the names of the traditional occupants rather

than by their numbers. Social contacts seem to be most frequent with family rather than neighbours, and when extra hands are needed, these are usually provided by family. Unlike in the Gaspé, for instance, where one tends to see clusters of the same names on mail boxes, here families do not tend to concentrate. Surprisingly enough even though neighbours are independent of one another, it seems that once a critical mass of farmers leave a **rang** (road on which farm lots front) the immigration of the remaining farmers accelerates and they tend to move to areas where their neighbours had relocated.

The Changing Environment

Once we started working on the area it soon became apparent to all researchers that it was far too late for base line (before) studies.

This was not only true for the operational area but also for a large part of the 77,000 acres around the core. The expropriation of the land had virtually transformed the personalities of the residents and even the people who travelled through the area. Possibly the sense of imminent disaster or possibly the lack of trust in government agencies led many to throw in the towel and move even when their houses or farms were not threatened. Before they left many cut the merchantable timber out of their woodlots and abandoned the land without consideration of the future. Within days or sometimes hours abandoned houses were pillaged and vandalized. Eventually fence posts and any good fencing disappeared. Soon the vandalized houses had to be burnt and their remains buried and the land was put to rest after more than a century of exploitation.

Farther away from the core area there was less abandonment; however, even in these areas there seemed to be a great deal of turnover in the occupants of houses and this will undoubtedly change the life style of the area. A large part of the new residents were not there to farm, and some of the more aggressive local farmers were quick to exploit the unoccupied land. Abandoned hay fields were usually only harvested, without having to reinvest the lime and nutrients necessary to maintain the land.

Only the land form is unaffected by the sociological changes occurring in the area. Changes in the age structure and composition of the vegetation are occurring quickly because of the illegal exploitation practices during abandonment. Now you can find woodlots which have been reduced to merely a fringe of trees around a slash pile.

New habitats are being created for the native animals. Some populations of animals, like the voles, coyotes, fox, marsh hawks, are faced with unlimited resources while others like the rats become temporary problems while they seek to reestablish themselves in the remaining buildings.

Reflections on the Grand Design

Although it is too early to do a critical analysis of the whole adventure inasmuch as the first airplane is not scheduled to land before 1974 or 1975, grand designs of this type are being dreamt up every day by wide-eyed politicians and there are some lessons which can be learned even now. The western provinces get their water diversion and irrigation programs, while Quebec and Ontario get massive airports regardless of whether they need them or not. Since this is not likely to change we should make the best of these programs.

The Ste. Scholastique airport with its large control area was a worthwhile concept. This arrangement opened all kinds of possibilities as far as land management was concerned. It could have been the first experiment in socialized land use in a non-socialistic state. It certainly should have been made into a model of proper land use in a country where up to now speculation, urbanism and industrialization, the keys to "sound economic growth," have always seemed to dominate the themes of master planning and where historic events have carved lot boundaries which had made the rational use of natural resources almost impossible.

As things stand now the Ste. Scholastique Airport Grand Design will likely be just another large airport with spectacular long runways, large buildings and high control towers. This gargantuan



masterpiece will be set in a wasteland of abandoned farms and poorly managed resources where the owners, like outdated irresponsible industrialists, will insist that it's not economical to protect the land and make proper use of it.

This predictable situation (which shows signs of becoming fact) will have come about because authorities who run airports have neither the inclination nor the desire to manage people other than those who are at work at the airport. Oddly enough it was because they did not want to be bothered by neighbours that the authorities decided to buy all the land around the airport core.

With 20-20 hindsight solutions seem simple and the following thoughts might have been useful if this Grand Design were still a gleam in the eye of politicians.

First and foremost, the airport core administration should have been a separate entity from the buffer zone administration. In this way there would be much less likelihood of plundering the buffer zone for the sake of the core area while stating that the buffer zone is an uneconomical unit. If the core area saved 10 million dollars because it was able to get sand and stone from the buffer zone then this saving should be a credit to the buffer zone account not to the construction of the airport proper as it is now.

Second, a task force of a few wide-awake conservationists should fly over the area to determine the most obvious natural features which must be saved. In fact conservationists would not have even let them go in to make the crater like irreparable probe holes to evaluate the quality and quantity of those particular sand resources. The conservation task force might also set priorities for studies which might very well show that some areas might contain unique flora or fauna or natural communities. The group might point out sources of pollution which should be controlled as part of the cost of land management. Belle Rivière, (Pretty River), whose head waters are the bog of the core area, is an open sewer for the town of Ste. Scholastique, the wastes of a

rendering plant and a cheese factory all located on the airport site. This river is so polluted that one can stand on an old dam at an abandoned grist mill, just below Ste. Scholastique, and watch the gases bubble up to the surface of the slimy green water. If you can stand the smell, the pond is really very pretty, framed by healthy overhanging bright green willows. Because of the potential indirect hazard to aircraft, the fact that most urbanists understand the implications of solid waste disposal and the low remedial costs of cleaning them up, most of the dumps have been closed and covered over. Strangely enough the largest dump in the region located in the northeastern section was excluded in the expropriation and now forms the boundary of the airport at one point.

Third, planners should have on their staff a group of people who understand the land, its people and their institutions. This group could be made up of community resource developers, rural sociologists, extension specialists, land-use agronomists and ecologists. These people could initiate designs but their most important role would be to evaluate the plans of the town planners, urbanists and engineers who in our present system have all the power to decide what will be done with the soil and living rural landscape. A group such as this completely enmeshed in the day-to-day operations of the management of the land at Ste. Scholastique could have foreseen and possibly suggested alternate methods or procedures which would not only have kept the people on the land, and the land in production, but in all probability could have brought the whole of the airport including the land and its people into a harmonious productive unit.

Fourth, the order of priorities should be changed. Before hiring the first soil test company or group of civil engineers, the buffer zone land administration body should begin applying their land management plans. At Ste. Scholastique, because the land planning program was late and indecisive, half-baked plans kept appearing in publicity releases and unfounded rumours spread making the authority ineffectual. The land administration

body should also be responsible for the application of acts and laws such as those concerning pollution or the use, misuse or abuse of the land by their tenants. Administration should also set and enforce rigid rules on agricultural and forestry practices which have been accepted by the rural land-use planners.

Fifth, base line ecological studies (in their broadest sense) should be done now in all areas susceptible to change through grand designs and particularly at the limits of urbanization. It is most frustrating to have to spend time on a study in the St. Lawrence basin trying to determine the most important elements of the animal communities, or the relative importance of major soil types such as clay, sand, till or muckland, on the animal fauna when you should be studying potential impact of changes in land use. The Canadian Land Inventory took us one step nearer to this objective, but when confronted with a development such as Ste. Scholastique the need for a more detailed study of a greater number of species, the need to integrate the present land use and social factors into the system becomes very apparent.

The Last Word

Perhaps the Government now feels it has bitten off more than it can chew. Possibly the rivalry between the Ontario and Quebec politicians concerning the size difference between the Pickering, Ont., and the Ste. Scholastique airports will inevitably make the powers decide to give back half of Ste. Scholastique to the natives. I, for one, would be sorry to see this happen, not that I think the experiment has been a success, but because the completion of Ste. Scholastique will give planners, administrators, resource scientists, and even politicians an experience and many lessons which should profit all Canadians.

Prof. J. R. Bider,
Wildlife Biologist.

Forestry At Ste. Scholastique

As Roger Bider mentioned in the preceding article, some landowners, facing expropriation, stripped their woodlots of any saleable timber and did so without too much concern for the land remaining. Although the destruction is regrettable, it is not irreparable — it is just one more of the tasks facing the planners and developers of the approximately 77,000 acres of land surrounding the actual site of the Ste. Scholastique airport.

Plans are already underway to manage intensively the existing forest resources of the region and establish new forests outside the area reserved for the airport itself. This management plan for both protection and production forestry is under the capable direction of the Laurentian Forest

Research Centre of the Canadian Forestry Service. The Centre is collaborating closely with the airport authorities, regional planners and their affiliates in making recommendations which will form the basis for a comprehensive forestry program. This plan will draw together the isolated woodlots, sugar groves and reforested wildlands into a cohesive unit for multiple use on a medium to long-term basis. There are nearly 24,000 acres of land of highly variable forestry capability within the expropriation site. Approximately 1,000 acres of this has currently good forest production potential, containing vigorous stands of 25 to 75 years of age. It is planned to use these forests as a model to demonstrate to local landowners the basic methods of managing the region's hardwood, mixedwood and conifer stands.

During last fall and winter 60 men employed under the Work Stimulation Program, organized locally by the Manpower Centre of Ste. Scholastique, produced 100,000 cubic feet of wood, of which nearly one-third was saw-timber and two-thirds pulpwood and firewood. The production of this total cut from roughly 250 acres averaged 800 board feet of logs, three cords of pulpwood and a cord of firewood per acre. The removal of this amount of wood products in the form of a partial cut left the stands treated in excellent shape for continued growth. This project also provided useful jobs for many in the local communities. Plans are, if funds can be obtained, to maintain a permanent forest work force of 25 men.

However, production forestry is only one of the goals in the main-



tenance and expansion of the forest cover of the region. Well-managed healthy forests, in addition to producing income, can provide the needed diversity to relieve some of the monotony of the artificial, engineered landscape that will eventually surround the new airport. Forestry is a good alternative for lands abandoned or restricted for agricultural production. Forests of varying species of different ages interspersed with roads and trails provide an ideal environment for many forms of outdoor recreation. They also produce useful food and cover for terrestrial and aquatic wildlife uses and act as shelterbelts from wind and snow. Furthermore forests can be one of the most effective noise-reducing screens for airport ground activities and reduce air pollution problems.

The potentialities for this people-oriented forestry plan established close to a rapid growth region under the close supervision of Federal forest scientists of the Department of the Environment offer many dividends. The first task is to demonstrate the essential techniques of using the local forest resources for income and employment, without destroying the long-term potential of these stands for continuous wood production, environmental protection and recreation.

A second and possibly even more important use of these islands

of green in the decades ahead as the lands outside the expropriation site become built up is their great potential, availability and ready access for integrated use and urban forestry. Here future forest management for amenity has a challenging role to play. From this viewpoint these forests can be used for outdoor recreation of many types and forms. A role that can dovetail neatly with the production forestry methods now being instituted.

Here lies one of the most vital

aspects of this initial management of the new airport forest lands. The opportunity of demonstrating to the eyes from the skies as well as to those on the ground the potentialities of trees and forests being moulded into a production-protection forestry project of impressive dimensions. An excellent start has been made and the continuance of this unique environmental forestry project will be watched with great interest.

Prof. A. R. C. Jones,
Dept. of Woodlot Management



Harvesting operations remove the crowded and the defective as well as the mature and overaged trees leaving the forest in better condition for rapid growth and sustained production.

The Family

Farm

Published in the interests
of the farmers of the province
by the Quebec Department of
Agriculture and Colonization

THE FARM MACHINERY DIVISION OF THE QUEBEC DEPARTMENT OF AGRICULTURE

In view of the particularly large investment which machinery has come to entail on a farm for some years past (about one quarter of the total investment), the Quebec Department of Agriculture decided to reorganize the services it was providing in this field and, in 1970, it set up a special farm machinery division. That division is the subject of this article.

During the two years of its existence, the Farm Machinery Division of the Quebec Department of Agriculture has striven to provide all the information needed by Quebec farmers to choose, maintain and use their agricultural equipment.

The Division's staff consists of agricultural engineers and specialized agriculturists working at the Department and in most of Quebec's agricultural regions.

At the Department, the Division and its personnel are a real reference centre and source of information for the agricultural advisers who ensure liaison between the central services and the farmer.

The Division's activities

The Division's agricultural engineers are the indispensable guides of the farmer, who is increasingly replacing manual toil with power-drawn or power-driven equipment. The Division has therefore compiled reference guides on most of the items of farm machinery on the market in Quebec with details about

their construction, output and potential profitability in relation to their cost.

The division's experts also compare the various technical aspects of the principal makes of a piece of farm equipment — a tractor for example — and then make available to the farmer detailed and comprehensive information about what there is on the market, with a comparative table showing the advantages of the different models for sale.

"We will not say that one make of forage cutter is better than another," says Mr. Guy Jacob the head of the Division, "but we do encourage the farmer to buy one type of machine rather than another — always, of course, taking into account his needs, resources, the size of his farm and his plans for developing it."

The Division thus has numerous guides which the farmer can obtain from his regional agricultural office.

The Division's recommendations are based on exhaustive enquiries among actual users or, in the case of innovations, on practical trials of the equipment at the Department's experimental stations during which it is studied in minute detail and under all working conditions.

Mr. Jacob adds that machines subjected to this range of tests are rented from the company that makes them or from the manufacturers' agents. He also stresses his Division's independence, objectivity and impartiality.

This objective approach does not,

however, mean that the Division is isolated from the agents and suppliers to the farmers. On the contrary, it has excellent relations with the various dealers' associations and the chief Quebec manufacturers, who willingly cooperate in the Division's work.

Direct contact — with the farmer

The Division's activities do not of course stop there. Its specialists also attach great importance to direct contact with the farmer — hence the marked interest during recent months in audio-visual screenings dealing with different aspects of farm machinery and in the preparation of relevant courses for farmers in adult education programs.

— and with the world at large

This entire technical information effort is extended through the Division's participation in the Farm Machinery Show ("Le Salon de la Machinerie agricole") held every two years in Place Bonaventure, Montreal, and through the attendance of its specialists at various lectures and talks, study days and professional gatherings.

Another forthcoming event in this field is the provincial plowing contest, for which the Division is to be the host in 1973 and which it plans to hold at the Deschambault research station. In this case the event is of added importance to the Division because it has traditionally been near Montreal.

Advisory committee

The technical information on agricultural machinery already available to farmers is eventually

to be supplemented by a study of actual problems of distribution and after-sale servicing and utilization of the machines.

In June 1972, the Department set up the farm machinery advisory committee. This body, composed of manufacturers' and dealers representatives, members of farm associations and institutes of agricultural technology and universities, and an engineer from the Division, is responsible, amongst other things, for advising the Minister on all problems connected with the farm machinery industry.

In the near future, this new body will proceed to organize specialized courses for farm machinery mechanics. It is also keenly interested in the report of the Royal Commission on Farm Machinery (the Barber Report) with the ultimate object of recommending to the Minister certain measures which it considers advisable to apply in Quebec.

These two projects are actually only the first stage of a realistic program that the committee intends to tackle to bring valid solutions to the problems posed by farm mechanization. The problems are real enough; some of them are known and understood but others have still to be defined or pinpointed. "But," says Mr. Jacob, "one thing is sure — we are going to tackle them."

Going still further but, for the time being with certain reservations, Mr. Jacob thinks that eventually the committee may even receive complaints from farmers who

consider that they have been wronged when buying or using farm implements.

"In this way," he points out, "the committee will supplement in a positive way the direct action of the Division and its specialists."

In the meantime, the Division does not intend to rest on its laurels. Though still young, it is efficient and will continue to strive to meet the farmers' needs and provide them with the services they have a right to expect.

Quebec's Blueberry Industry

(Text of paper read at the International Geographers' Congress at St. Léon-de-Lebreque on August 8, 1972 by Gilles Pinard, forestry engineer.)

The North American blueberry crop amounts to about 125 million pounds a year. It is harvested over a period of 3½ months starting at the beginning of June and ending with the first fall frosts about the middle of September.

Two main types of blueberries are grown on this continent: the highbush chiefly used for fresh consumption and the wild lowbush, used mainly for freezing and processing.

The highbush type, which accounts for 64 per cent of the total crop, is grown in the United States. The 11 States that produce this type all border the Atlantic or the Pacific Oceans except for the State of Michigan, where production (35 million pounds) is located to the south of the Great Lakes.

The wild lowbush type, accounting for the remaining 36 per cent of the North American crop, is chiefly produced in Maine, New Brunswick, Prince Edward Island, Newfoundland, Nova Scotia, and Quebec.

On the average, Quebec produces 7.2 million pounds of blueberries a year. Most of this (60 per cent) comes from the Saguenay-Lake St. John area. Another 28 per cent is harvested in the Abitibi region and 10 per cent on the North Shore of the St. Lawrence.

The Lake St. John region is particularly suitable for blueberry production because of the very large stretches of alluvial deposits with a fluvial-marine finish that are found bordering the large rivers flowing in Lake St. John. On these sands, when soil conditions permit following a forest fire which has destroyed the existing climax vegetation, the forest is reconstituted, passing through the *Vaccinium* stage on the way. It is then that, for two or three years, such areas are favourable for abundant blueberry production. However, the efficiency of our forest protection services has led to a considerable decrease in the size of forest fires and hence of our blueberry production.

Thus the value of our blueberry crop, which was worth \$2.5 million in 1945, steadily declined to the lowest level of only \$300,000 in 1961. Faced with this startling drop, the Quebec government launched a large-scaled program to revive the province's blueberry industry.



As a result, 22 blueberry fields with a total area of 34,000 acres have been developed, a six million pound capacity freezing plant has been built at St. Bruno, a blueberry research station started at St. Léon, and an extensive campaign carried out to motivate and encourage the participation of the population. This whole program has cost about \$5 million.

This investment has had a considerable impact on the blueberry industry in general. The volume of our production has risen from 2.7 million pounds in 1961 to an

annual average of 7.5 million and its value now represents over seven per cent of the total value of all agricultural products of the Lake St. John region, among which blueberries rank fifth closely behind eggs, cattle, and hogs.

We do not wish to give the impression that all the problems of our blueberry industry are now solved or even under control — far from it. At the marketing level, the small number of dealers is disturbing. Furthermore, the fact that our blueberries are mostly shipped to the United States

and that our production serves as a buffer to take up the slack in the total demand leaves us little or no say as to quantity, quality and price, etc.

The operation of the 22 blueberry fields developed by the government has been entrusted to blueberry producers' syndicates organized into a federation which administers a joint marketing plan.

The costs of such an operation amount to about \$7.50 an acre,

including burning in a three-year cycle, introduction of insects to ensure adequate pollination, control of competing plant species, supervision of picking, and administration of the syndicate. To ensure the profitability of the enterprise — which is financed out of the \$12 annual membership fees and a levy of about two cents per pound of blueberries picked, it is necessary to get an average yield of 300 pounds per acre in the first bearing year and of 142 pounds per acre in the second.

Some of the syndicates have already reached this objective and the government's new assistance measures — including a production grant of seven cents a pound which is gradually phased out and is dependent upon an annual 25 per cent increase in yield — lead us to hope that the syndicates will have the necessary funds to use the recommended growing methods and render their blueberry fields profitable.

In our province, blueberries are picked with a tool called a rake. The number of pickers in our forests is estimated at 8,000 and the number who go to the syndicates' blueberry fields at 2,500. When the crop is excellent it is not unusual to find families earning between \$1,000 and \$2,000 during 15 days picking.

The steps we must take within the next few years, if we want to progress and attain an annual production of 20 million pounds, are as follows:

1) Raise the yields of our blueberry fields to a profitable level; 2)

Improve quality; 3) Process as much of our blueberry crop as possible in Quebec.

We feel justified in hoping that the research now being conducted, the interest taken by the Department of Agriculture in this production, and the spirit now being shown by the growers will result in these steps being successfully taken and in the attainment of the objectives that have been set.

Beef in Variety

Tom Tweddle, an animal science specialist, writing in a current issue of the **OECD Agricultural Review**, visualizes that in the future, as in the past, all sorts of beef will be produced from a growing multitude of breeds and crosses, and under various production patterns and systems which also carry the impress of individual farms and seasonal influence, especially where grass is the pivotal crop. Of the potential of world demand for more meat, particularly as living standards rise, there can be no vestige of uncertainty; but it has also to be remembered that beef is but one kind of animal protein and the market competition between meats therefore becomes of extreme importance to the producer.

The author points to the supply of calves for beef as the inescapable key factor; so that beef production in all its modern ramifications and disparate systems rests solidly

upon the dairy herd and the associated perplexity of how to get more beef calves without "opening the flood-gates of milk surpluses." Mr. Tweddle suggests that improved herd health, especially breeding health, can help in this respect; also better calving percentages, fewer abortions, reduced need for herd replacements, would all allow for more dairy cows to be bred to beef bulls; additionally, the increased use of crossing sires from the bigger breeds will greatly improve the potential carcass weight of the finished product.

The demand for beef is not, however, confined to greater quantity. Consumer-dictated considerations impose a level of uniformity in which lean carcasses carrying a minimum of fat (and that white rather than yellow) feature prominently. "Desirable carcasses," says Mr. Tweddle, "will be those that satisfy producer, butcher and consumer. They will most likely result from the use of intentionally bred, long, clean-fleshed, fast-grown animals, managed in systems of production geared to the farm. Finishing periods will be carefully planned and controlled as being expensive in feed and if overdone can ruin the carcass for all but limited markets."

Within the modern options of beef breeding resources and the extensive variety of production systems, the farmer's thinking must basically be directed upon the end product — what, when, where and how it is to be sold — and this strictly related to his economic ability of doing so.

"Overall," says Mr. Tweddle, "we shall continue to produce all kinds of beef from the multitude of types of calf available, born all the year round using the wide variety of feeds and grazing at our disposal. In this way the great variety of market outlets will continue to be satisfied. Variety is said to be the spice of life; it may also be the future success of beef production."

Animal Behaviour

Despite man's association with his farm animals for thousands of years, it is only in modern times that a disciplined inquiry into animal behaviour has been slotted into agricultural research. Quite apart from the academic interest in behavioural patterns themselves, it is the interpretative use to which that knowledge can be put in terms of day-to-day husbandry practice that makes it so valuable. Hence the interest shown in four papers on this subject which were read at a conference of the British Cattle Breeders' Club.

Every dairy farmer and stockman knows the "boss" animal in his herd and the accepted hierarchy that puts the leader in front at milking time and, other things being equal, the rest of the herd in descending order of age seniority. But as Roger Ewbank pointed out, since the older cows coming into the parlour first tend to have a higher incidence of mastitis than the younger animals, the milking machine becomes a distinctly possible medium of spreading the disease. Batching up and milking

the younger animals first is the obvious answer, but an inherent sense of precedence will cause a reversion to the old order once the artificial control is lifted. Also on the subject of mastitis Mr. Ewbank referred to a study of the time spent lying down by a herd of housed and tied-up Friesian cows and, in particular, individual preference for inclining to the right or left, i.e., with the right or left side of the udder in contact with the floor. Unless, therefore, the cowman ensures that the cubicles are always well littered, chilling of the udder can readily predispose the animal to the complaint.

Dr. D. B. Stephens reported on observations made at Babraham on groups of Friesian calves reared in open pens on an artificial milk feeder. Their behaviour at the teat demonstrated a social order where might is right, the heavier calves displacing smaller calves and spending relatively more time sucking. A minority group, indeed, seemed to be socially quite inadequate and incapable of learning to approach the artificial teat on their own — a circumstance which again calls for human watchfulness and intervention.

Belief in the "confidence trick" of fostering a lamb on a ewe by a false scent, one of the oldest pieces of shepherding lore, was shaken by Mr. J. R. Bareham's exposition of mother-offspring relationship in the first few hours after birth. For eight hours after parturition the ewe will in fact, he said, accept the first lamb she is given if her own is not present. The lamb's location of the udder is its first and vitally

important need and occurs naturally in the process of the ewe's initial licking. From the start its teat-seeking efforts are concentrated in the soft, leg regions of the ewe, and in experiments in which lambs were removed from their dams at birth and given discrimination tests, the preference for soft objects such as foam was characteristically marked.

Such papers as these and others which combine the theoretical and practical aspects of animal husbandry are of undoubted value to livestock farmers.



A Busy Summer

The **South Bolton Women's Institute** (Brome Co.) has had a busy and eventful past few months. Card parties were held with the proceeds helping to buy new drapes and shades for the Women's Institute hall. Starting in May we began making plans for the Annual County Convention which proved to be a success. In July we purchased new stacking tables to be used at suppers when the kitchen in the hall is completed. We held our annual bake sale in August, which proved most successful.

We were hosts for the Semi-Annual Convention with the guest speaker being Rev. John Peacock from Cowansville. A new project in our plans is a Christmas sale to be held in late November.

At the present time we are in the process of making a quilt of North American birds. Recently we bought a small electric stove to be used in the kitchen.

The past months have been a very prosperous and busy time for the ladies of the South Bolton W.I., and we are hoping to be able to continue working on future projects.

Children's Fair

Stanstead County W.I. members sponsored another successful Children's Fair (the 57th) at the Ayer's Cliff Fair grounds on September 16. There were 903 exhibits of fruits, vegetables, flowers, handicrafts, wood work and art. The all-day program included a talent show, races and the awarding of two trophies. The

highest aggregate for girls went to Kathleen Owen, Hereford, and the boy's winner was Brian Butler, of Brown's Hill, Ayer's Cliff. At noon the Ayer's Cliff branch of the W.I. served a delicious chicken pie dinner with a great many of the judges and public taking advantage of a good autumn meal.

A Tour Close to Home

For their July meeting **Sutton W.I.** (Brome Co.) hired a bus and 38 members and friends went on a tour of interesting places in the locality.

First stop was the local fish hatchery where we were given a guided tour of the ponds and were able to see the fish at different stages of growth. Then on to the home of Mayor and Madame Benoit where we were met at the gate by the Mayor and at the front door by Madame Benoit, who welcomed us into her home, telling us a little bit about their life and where they had obtained different antiques which were in their home. She gave us a tour of the home and the kitchen where a great deal of baking is done for sale. We also visited the home of Mrs. Gilbay, which is a beautiful old stone farmhouse furnished with antiques. Then on to the Country Inn on Brome Lake where we had afternoon tea.

After a brief stop at Brome Lake Duck Farm, we went on to the old Tibbitts Schoolhouse which has been turned into a museum containing many old documents, desks and other items pertaining to the early days of the school.

At our August meeting we enter-

tained local senior citizens. After a very brief meeting, a singsong and a short play, which was put on by two members of the Fordyce W.I., were enjoyed. Lunch was served to 75 people. The same afternoon and evening the Sutton W.I. served cakes and refreshments for the Red Cross Blood Clinic.

Citizenship

"The status of a person who owes allegiance to the government in return for political rights and privileges." This is how my dictionary describes the word citizenship. I wonder how many Canadians have ever really thought about just what it means to be a Canadian citizen. We enjoy many political rights and privileges in Canada. The right to choose a candidate as a Member of Parliament to represent us in Ottawa; the right to freedom of speech through this representative; the right to correspond with our M.P.'s and Ministers about affairs that concern us (they do answer!); pensions for elder citizens, widows, and disabled persons; Medicare; the privilege to move freely from one province to another; the right to own private business and to work for our own benefit.

Compare this with some other countries where people have practically no rights — such as choosing their own government, owning property or a business, or freedom of speech.

If we owe allegiance to the government for all these rights, we should refrain from belittling our officials who, I am sure, are doing their best. We should try our best to help our elected

representatives by getting involved and studying our nation's business before we criticize too strongly. True, some criticism is good, not from uninformed, irrational citizens but from intelligent, level-headed citizens who have studied the situation.

We have just been to the polls to elect a government to run our country. To these people we owe our allegiance.

Mrs. Sidney Patterson,
Q.W.I. Citizenship Convener.

Members of the Quebec Women's Institutes offer their deepest sympathy to Provincial Secretary Mrs. A. Burgess, whose husband passed away in September.

F.W.I.C. News

The Federated Women's Institutes of Canada gives full support to Young Canada's Book Week, November 15-22 and urges its members across the country to publicize it well.

A Day to Remember

Winters are long and cold, particularly so for some of our senior citizens who cannot get out-of-doors for weeks on end. When spring finally arrives, what could possibly be more appealing to them than an outing in the country. With this thought in mind, last spring the Abbotsford W.I. (Rouville Co.) entertained approximately 75 senior citizens of the Eventide Home (sponsored by the Salvation Army), who were driven out from Montreal West in buses.

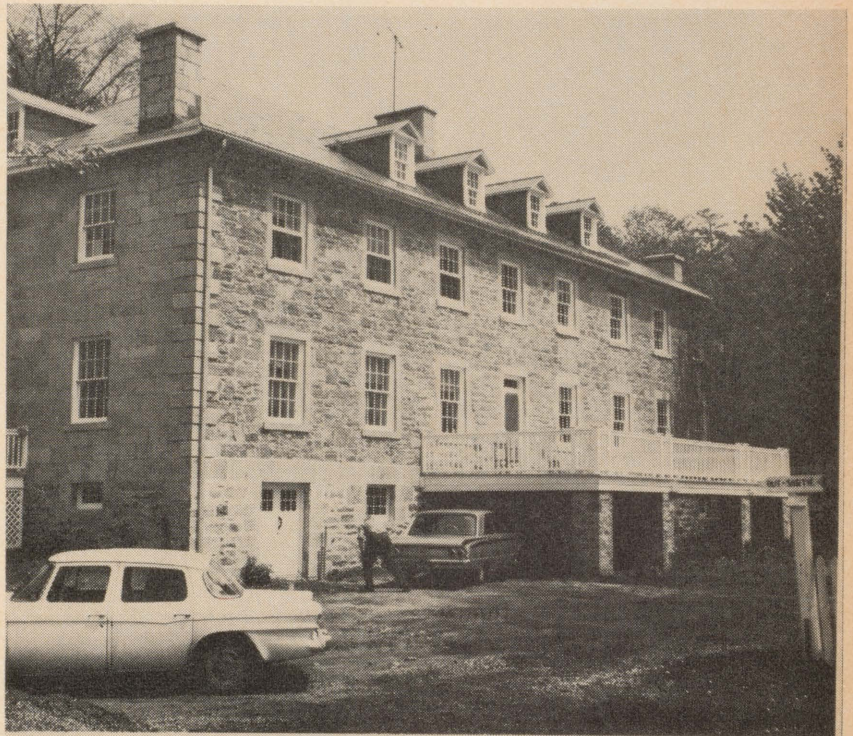
The group enjoyed walking about the Parish Hall grounds, viewing the Yamaska Mountain and the countryside with its spring flowers and apple blossoms. They also visited the St. Paul's Anglican Church and the Abbotsford United Church where familiar hymns were played. The hall was beautifully decorated with spring bouquets, which were later given to some of the senior citizens to take home. Light refreshments were served with lots of tea and coffee.

It was a day to remember, not only for members of the Abbotsford W.I., but especially for their guests.

Living with History

My husband and I realized that our farming days had reached a climax when we were told we would have to make the change to a bulk system with our milk project.

We took the plunge, sold all and moved to Carillon where we took on work as curators of a Museum looked after by the Historical Society in our County of Argenteuil. We found the building and contents had not been cared for for some time and we became



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determined to make it one of the best museums in the country.

Then a busy time ensued. Cleaning, waxing and rearranging — no doubt this work was good for us. It gave us a new interest and no time to think of the past and of the place we had farmed for 35 years.

On opening day how pleasing it was to see visitors wandering around the beautiful grounds and through the 10 rooms of priceless exhibits, and to hear such comments as "what a marvellous collection of bygone days," "how very interesting and educational!" This Museum is on the banks of the Ottawa River and is a fine example of the architecture of the 19th Century. It should be visited by young and old alike.

We retired as curators after seven years but often recall pleasant memories of our days at the Carillon Barracks.

Mrs. A. Heatlie,
Frontier W.I.,
Argenteuil Co.

Harwood's 25th

On September 7, the Harwood Branch (Vaudreuil Co.) celebrated its 25th anniversary. Nineteen members and four guests met at the Summerlea Golf and Country Club where a delicious chicken dinner was served. The table was decorated in our colours and special programs placed at each setting. These included the poem composed by a charter member, Mrs. E. Prinn, summing up the work done by the branch over the 25 years.

(Continued on page 20)

Harwood's 25th anniversary party was an excellent opportunity for Past Presidents of the Branch to get together. From left to right: Mrs. G. Henderson, Mrs. W. Ratcliffe, Mrs. E. Edwards, Mrs. K. Davis, Mrs. E. Prinn, Mrs. W. Dooley and seated is Mrs. J. McKellar. Mrs. H. Hanna was unable to attend.



Harwood Women's Institute — 25th Anniversary

Happy Birthday to us — a quarter century old!
And I think it is time our achievements were told,
So I'll try to remember, with smiles and with tears,
Some of the things we've done over the years.

We packed Bundles for Britain with hearty good will,
And I think we could perhaps be sending them still
But we finally had to give up in despair,
Knowing we never would get anywhere.
We sent packets of food and clothing and toys
For a numerous family of young girls and boys.
Poor Mrs. St. Aubin worked harder than most
Getting those Bundles away in the post.
At last things in Britain were well on the mend
And we thought it was time for our Bundles to end.
We collected clothing and goods for burned-out families,
And helped to pack more for the poor refugees.
We had food sales and teas, very dainty and nice
And gave lots of work for a very small price.
Our Annual Card Party was a Social Affair —
New hats and new dresses and mink stoles went there;
We canvassed the merchants all over the town,
And, bless their hearts, very few let us down.
Ella Barrett was our first social convener
And few could resist her coaxing demeanor.

Liz Campbell came over and taught an art class —
We enjoyed it so much we could not let it pass;
So Fran Wren stepped in; for a good many years
She guided our tries to be little Landseers.
We also went in for theatre art —
'Canada Calls' was the first in this part.
Written and directed by dear Mrs. Wyse,
We appeared to her credit in many a guise.
Our pageant's gone on to national fame —
Ev'ry province in Canada has now heard its name.
The Harwood Singers were formed, and in many ways
They earned this group the highest of praise;
They appeared at conventions and many a hall
And their retirement is now mourned by all.
Our girls sang in French at Federated Convention
(Our talents are really too varied to mention.)

We had courses in tile work, a cooking class too;
And many smart hats soon came into view
Resulting from lessons from Janet McQuat;
A new Easter bonnet? She'd help you to do it.
We learned to make gloves and moccasin slippers
Even purses and wallets that didn't need zippers.

With the Chamber of Commerce we bought a wheelchair
For a poor local lady who'd no legs to spare.
At her demise the chair returned to Harwood
And has since spent its time round the whole neighbourhood.
Wherever somebody needed its care
There went our hardworking and busy wheelchair.

We set up our bursaries, one, two, three, four,
And, though now for some years we've had them no more,
We like to think back that we gave a wee lift
To some lad or lass who needed this gift.

We brought out a cookbook with time, cheek and labour,
And sold all three hundred to member and neighbour,
Thus netting our treasury a nice dividend
And giving our menus new life without end.

We've had a few trips and picnics galore
To which friends, neighbours, children, came by the score.
Upper Canada Village and Saint Helen's Isle
Were visited by us in very fine style.
Our two picnic tables placed on the highway
Have given a welcome on many a day
To visitors travelling in our 'Belle Province'
And many have written in grateful response.

We've sent cards and flowers to those who were ill,
And often at Christmas the baskets we'd fill
Brought good cheer and love to old and forlorn
In memory of Him who on this day was born.
We worked and we saved and were finally able
To buy our new hospital a bed and a table.
(And if any of you must go there for a rest —
Please insist on our bed — I'm sure it's the best.)
We gave flowering trees to our Centennial Park
To leave on our town a bright beauty mark.
We've taken the veterans under our wing,
And visit them in autumn, winter and spring,
Taking cigarettes, candy, playing cards, books,
And cookies fresh baked by our excellent cooks,
Trying to give, with gay greetings and such,
A little to those who have given so much.
We've filled stockings and ditty bags, sold UNICEF art
To help little children in whatever part
Of this tired old world they may happen to live
For it's part of our creed to love and to give.

Now I can't finish up this little ditty
Without mentioning our work for the Service Committee.
We've knit wee shirts, and cardigans both large and small,
Sewed sacques, gowns, pieced quilts, and all in all
So much appreciated was the work that we tendered
We received a nice plaque for services rendered.

So here's to our W.I. I'm wishing you the best
For many, many years of happiness and zest.
And I'm hoping when the Harwood group comes together ev'ry fall
There'll be friendship in that 'human heart common to us all'.

Alice Prinn,
Dorion, Que.

(Continued from page 18)

The president Mrs. K. Davis said Grace and welcomed the members and guests. An anniversary cake, decorated with our crest was cut by Mrs. J. McKellar, the founder and first president of the branch. Twenty-five year pins were presented to: Mrs. J. McKellar, Mrs. E. Prinn, Mrs. W. Dooley and Mrs. H. Reid.

Dear W. I. Members:

I believe credit should be given to branch members who prepare programs themselves; who find and read articles of interest; who prepare contests and quizzes. Credit should go to the Convener of Education at **Wright** who led a panel discussion on "The Merits of the New School System versus the Little Red Schoolhouse." An

interesting thing about this meeting was the inclusion of a nine-year old girl in the discussion. Roll calls included: Tell of something that saved you money; name a food item and tell where it was grown; name a tree used for reforestation and tell a fact about it; quote a few lines from a popular song and tell what you think they mean.

Interest was shown in School Fairs, prizes given, gardens judged; 4-H work supported; food and miscellaneous items sold; glass collected for glass re-cycling project (Howick Council). Talks on . . . "Meals-on-Wheels" (a rewarding work for volunteers); on Red Cross plus films; on England and her W.I. branch by an English visitor.

Bus tours to North Pole, U.S.A.;

Richmond and Melbourne Museums; Rock Island and Stanstead Museums and Stanstead Journal Office; the Beattie Inc., plant at St. Chrysostôme where a variety of pie fillings are made.

Finland, Scotland, Isle of Skye, England and Norway were visited via slides.

Richmond Young Women's celebrated their 25th anniversary at Melbourne Ridge Hall with the guest of honour being Q.W.I. President Mrs. V. R. Beattie, who had been one of the first members to start this branch. Mrs. Beattie was presented with a Life Membership and a bouquet. Another bouquet was given to Mrs. Irene Kerr, branch auditor for several years. The branch history was read and a skit put on by the Conveners.

Our former Q.W.I. Secretary, Miss Norma Holmes, had a bad fall in August and fractured her hip. At present she is convalescing in Hôpital d'Youville in Sherbrooke, and expects to be there until December. We are happy to hear she is in good spirits and wish her a speedy recovery.

Aylmer East reports news of our former Q.W.I. President, Mrs. Ellard. As a guest of Craigflower W.I., Mrs. Ellard attended a party in the summer at Government House, Victoria, B.C.

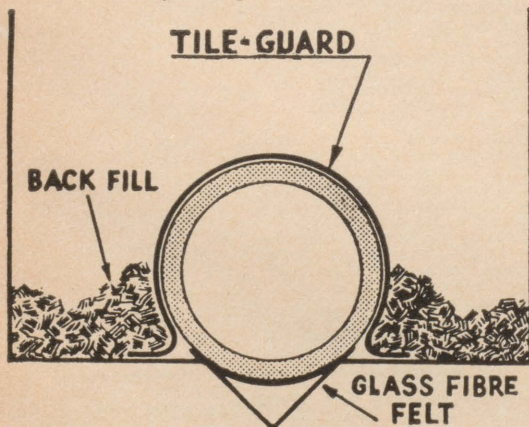
Missisquoi County branches have lost their faithful County Convener, Mrs. Lynn Bell, who passed away suddenly in August.

In closing, have you shared W.I. with a neighbour, friend or newcomer to your community by inviting them to your meeting? If not, try it. They might become interested and wish to become a member. Have you heard about the F.W.I.C. membership campaign for all of Canada.

Mrs. Perley Clark,
Q.W.I. Publicity Convener.

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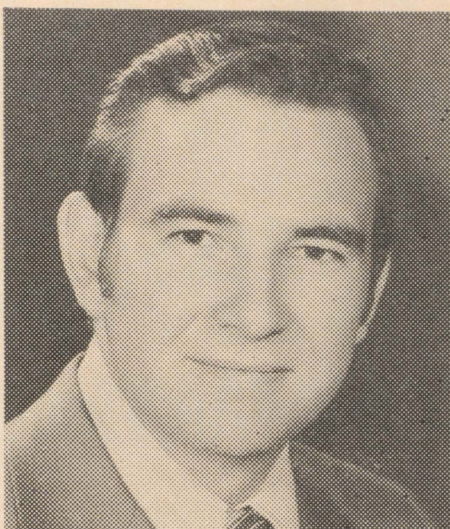


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